

## **Interlocal Agreement Exhibit J – next generation ORCA Replacement System Planning**

### **1.0 Purpose**

This Exhibit addresses planning for the replacement of the regional fare system. The project is referred to internally as the next generation ORCA Program. Per the amended and restated Interlocal Agreement, section 9.2.4.3, the Joint Board has the authority to approve future investments.

### **2.0 next gen ORCA Steering Committee Charter**

2.1 The Joint Board approved the next gen ORCA Steering Committee Charter on June 8, 2015.

2.2 The Charter defines the responsibilities and functions of the next gen ORCA Steering Committee which includes decision making processes and collaboration with the Joint Board, the next gen ORCA Project Team, and the regional Site Managers. The *next gen ORCA Steering Committee Charter* defines the responsibilities and functions of the Steering Committee and is attached hereto as *Attachment 1*.

2.3 The Steering Committee consists of individual agency members selected and appointed by their agency Joint Board member to provide advice and direction on the replacement of the regional fare system. Committee members constitute a cross-section of leaders with expertise in fare collections, policy, technology, operations and customer service.

2.4 The Steering Committee has program scope and schedule authority within the next generation ORCA budget authorized by the Joint Board. The Joint Board retains overall next generation ORCA program budget authority.

2.5 Changes to the next gen ORCA Steering Committee Charter must be approved by the Joint Board.

### **3.0 next generation ORCA Program Charter**

3.1 The Joint Board approved the next generation ORCA Program Charter on March 14, 2016. The Charter describes the overall scope of the next generation ORCA Program to replace or enhance all components of the existing ORCA system. The *next generation ORCA Program Charter*, attached hereto as *Attachment 2*, defines the program through 2022.

3.2 The next gen ORCA Regional Program Manager or designee will inform and advise the Joint Board on program status, budget, risks, issues, and provide information relevant to the Joint Board's interest.

3.3 The next gen ORCA Project Team, led by the next gen ORCA Regional Program Manager, will collaborate with Agency-designated point persons, and each agency's subject

matter experts) throughout the program. The Site Manager or other Agency-designated point person will coordinate agency review of program deliverables and present a consolidated agency view.

3.4 The next gen ORCA Project Team will be assisted as needed by Sound Transit procurement and legal staff. In addition, support to the program will be provided by the ORCA Regional Program Administrator, the ORCA Fiscal Agent and the ORCA Security Officer.

3.5 Administrative changes to the Charter can be approved by the next gen ORCA Steering Committee. More substantive changes require the recommendation of the Steering Committee and Joint Board approval.

#### **4.0 Planning and Procurement Phase**

4.1 Exhibit J provides authority for the next gen ORCA Program Team to plan the initial phases of the replacement system.

4.1.1 Planning - Program Plan, Systems Engineering Management Plan, Request for Information, Concept of Operations, Validation Plan, High Level Design, System Technical Requirements, Business Requirements

4.1.2 Procurement - Alternatives Analysis, Integration Plan, Technical Specifications, Procurement Strategy, RFP Scope(s) of Work, and Vendor Proposal Review.

4.2 Additional phases will be addressed under the next generation ORCA Interlocal Agreement.

**Attachment 1 to Exhibit J – ORCA Replacement System Planning**

**Regional Fare Replacement System next gen ORCA Steering Committee Charter**

**I. Naming**

The Committee will be called the next gen ORCA Steering Committee (Steering Committee) and will govern the Regional Fare Replacement System Project (next generation ORCA Program). It is authorized by the ORCA Joint Board and will serve for the purposes listed below.

**II. Purposes**

The Steering Committee is created for the purpose of working together to collaborate with the Joint Board, the next gen ORCA Project Team, and the regional Site Managers, and shall advise and direct on the replacement of the regional fare system. Steering Committee responsibilities:

- Provide general oversight for the dedicated project team
- Provide strategic leadership for the project making appropriate scope and schedule decisions within the budget authority (as delegated by the Joint Board)
- Inform the Joint Board of significant decision making regarding high level scope, costs, schedule, and technology choices
- Advise and provide direction on project processes and organizational structure
- Resolve project issues and interagency conflicts
- Prioritize tasks and resolve resource allocation issues based on project prioritization
- Address escalated contractor performance issues
- Champion the common vision for next generation ORCA outcomes
- Advocate next generation ORCA as a high priority within their agency
- Successfully complete the project.

**III. Relationship of next gen ORCA Steering Committee to ORCA Joint Board**

The Joint Board retains overall budget responsibility for the regional fare system. It is the role of the Steering Committee and next gen ORCA Regional Program Manager (Program Manager) to inform and advise the Joint Board on project status, budget, risks, and issues. The Steering Committee and Program Manager are expected to offer recommendations and to provide information relevant to Joint Board's interest in the regional fare replacement system project.

## IV. Practices

### Decision Making:

Decision making is based on a modified consensus model. Consensus is achieved if all members (or designated alternates) support, are neutral to, or not support the decision. Consensus is not achieved if any member or designated alternate elects to block the decision.

- Support - "I support the decision."
- Neutral - "I have no opinion."
- Not Support - "I think this may not be the best approach, but I can live with it."
- Block - "I cannot support this or allow the group to support this. I will provide a written statement as to why."

If a blocked decision is still unresolved after the Steering Committee considers the written statement, it will be escalated to the Joint Board for resolution.

Meetings: The Steering Committee will normally meet every other week though the committee may change the meeting frequency as necessary to meet needs. Additional special meetings may be called by the Chair as necessary.

Subcommittees: The Steering Committee has the authority to charter special subcommittees, as needed to address specific issues. Each subcommittee will have a duration determined by the committee.

Charter Amendments: The Steering Committee may amend this charter through the approval of a simple majority of the assembled members, constituting a quorum. The amended charter must also be approved by the ORCA Joint Board.

Budget: The Steering Committee may recommend changes to the project budget which must be approved by the Joint Board.

## V. Membership

Composition: The Steering Committee shall consist of individual agency members. Members will be selected and appointed by their agency General Managers/Joint Board Member. Steering Committee members will constitute a cross-section of leaders with expertise in fare collections, policy, technology, and customer service. Delegates will be appointed to provide back up support for members.

Term: A term of membership shall complete at project closure.

## **VI. Leadership**

The officers of the Steering Committee are the Chairperson and Vice-Chairperson. The Vice-Chair is the Chair-Elect and assumes the position of the Chair following the term of the current Chair. The Chair and Vice-Chair are determined by a vote of the Steering Committee. Both the Chair and Vice-Chair serve in their respective roles for a period of one year unless extended by the vote of the committee.

## **VII. Roles and Responsibilities**

The Chairperson is responsible for:

- Setting the agenda and leading Steering Committee meetings
- Calling special Steering Committee meetings as needed
- Ensuring escalated issues are resolved including creating special ad hoc subcommittees to deal with specific issues, as needed
- Supporting the Program Manager in communicating results and recommendations to the Joint Board.

The Vice-Chair is responsible for:

- Assisting the Chair in setting the agenda for Steering Committee meetings
- Acting for the Chair as directed.

Steering Committee members are responsible for:

- Participating in Committee deliberations and discussions of issues
- Representing their organization, program or committee in Committee meetings
- Communicating Committee decisions and actions to their organizations
- Serving on subcommittees as needed
- Performing other tasks as directed by the Chair.

***next generation ORCA Program Charter***

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**Version 1.2**

**As amended April 10, 2017**

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**Version History**

Version	Date	Comments	Phase
1.0	2/23/2016	Approved by the next gen ORCA Steering Committee	Planning
1.1	3/14/2016	Approved by the Joint Board with amended footnote, page 15	Planning
1.2	4/10/2017	Per Joint Board request for consistency, amended references for ORCA2 to reflect "next generation" or "next gen". Amended content specifically affected Charter title, Steering Committee and Regional Program Manager references. Embedded table (page 9 was not amended).	Planning

Note: The next generation ORCA Program Charter will be updated throughout the timeline as information changes and the concept is confirmed. Administrative changes can be approved by the next gen ORCA Steering Committee. More substantive changes recommended by the next gen ORCA Steering Committee will require Joint Board approval in the form of an executed Decision Memo. Program rosters will be maintained outside of this document as will current project schedules and budgets.

## **1 Program Definition & Rationale**

ORCA, the regional smart card fare collection system implemented in 2009 will be at “end of life” and the current operations and maintenance agreement with Vix, the ORCA vendor, will expire at the end of 2021. Following approval of the ORCA Next Generation Strategy in February 2015, the ORCA Joint Board representing the seven ORCA agencies initiated next generation ORCA<sup>1</sup>, a regional program to replace the existing ORCA system. The seven ORCA agencies are: Community Transit, Everett Transit, King County Metro, Kitsap Transit, Pierce Transit, Sound Transit and Washington State Ferries.

## **2 Program Objectives**

In February 2015 the Joint Board adopted the following strategic objectives designed to improve the quality of services provided to the public:

### **Improve customer experience**

- Programs for unbanked/underbanked--create programs that make it easier for customers without banking relationships to use ORCA to purchase tickets, take advantage of ride discounts and participate fully in any services ORCA may offer.
- Business and institutional programs--continue to provide programs that cater to the needs of local businesses.
- Instantaneous availability of loaded value--increase customer satisfaction by eliminating the waiting period for value added to the ORCA cards

### **Increase ORCA usage**

- All modes--make ORCA easily usable on all modes of transport
- Market penetration--make ORCA available through as many venues as possible in addition to the current retail network and ticket machines

The agencies have also agreed to the following strategic objectives related to efficient and cost-effective operation of the new system.

### **Fiscal responsibility**

- Lower Total Cost of Ownership (TCO)--ensure that the new system is cost-effective to implement and efficient to operate
- Lower upgrade and improvement cost--increase use of state-of-the-art technology to create efficiencies and design a system that is modular enough to be easily upgraded as technology changes

### **Operational efficiency**

- Roll out new functionality and upgrades faster--use technology and administration to enable the region to quickly assess and pilot new technology features and implement them efficiently
- Make data easier to access for agencies and public--allow agencies to find, analyze and report information easily

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<sup>1</sup> Internally and prior to April 2017, the program may be referenced as ORCA2 or ngORCA.

The next gen ORCA Project Team has also identified additional strategic objectives to be added to the list.

- Provide effective security to meet industry compliance for both customer and system data
- Be an expandable, open architecture system that's able to adapt and evolve
- Allow for acceptance of multiple fare media types

### 3 In Scope

The overall scope of the next generation ORCA Program is to replace and enhance all components of the existing ORCA system. These components include:

- Incorporation of local and regional fare policies, products and business rules
- Central clearinghouse functionality, business rules and operating procedures for financial transactions and regional revenue reconciliation, settlement and apportionment
- Customer and Business Account website fare media and product sales and account management
- Retailer sales network
- Data management and reporting (including financial, maintenance, and other reports)
- Fixed and mobile customer service equipment and tools for addressing customer requests
- Agency tools to guide system implementation and ongoing maintenance
- Fare collection/validation on all current ORCA modes: local bus, regional bus, light rail, commuter rail, ferries, and streetcars
- Operator displays and functionality to collect and manage fares while delivering service
- Communications infrastructure for fixed and wired platform and wayside fare collection devices
- Integration with agency-specific front-end and back-end systems such as automatic vehicle location (AVL), Automatic Passenger Counter (APC), and finance systems
- Mobile fare payment inspection devices
- Servers and other equipment needed to support fare collection and manage system devices and functions
- Software development for devices and backend systems
- Integration with financial institutions including payment gateways
- System security including protection of Personally Identifying Information (PII) and compliance with bank card industry PCI-DSS security standards
- Fare media inventory and distribution
- Revisions to regional and local agency business processes

The scope will include analysis of the following additional new functionality to determine whether or not it is to be included in the new system:

- Open payment capability
- Mobile applications for product sales and account management
- Communications infrastructure for real-time fare data transmission for all fare collection devices
- An agency-controlled data warehouse
- Expansion of existing ticket vending machine (TVM) network to region-wide vending machine fare media and product sales
- Transit facility parking fee management
- Vanpool and paratransit fare collection

The above items will be assessed during the planning phase, and updates will be made to the next gen ORCA Program Charter as scope decisions are made and approved by the next gen ORCA Steering Committee.

As part of the next generation ORCA Program scope, in conjunction with agency Subject Matter Experts (SMEs), the next gen ORCA Project Team will capture, analyze, and document individual agency needs for integration, develop detailed interface requirements based on those needs, and specify functional interfaces, such as APIs.

The scope also includes analysis of, and potential inclusion of, expansion to additional agencies and transportation modes such as ridesharing, parking, bike share and car share as well as investigation of a potential multi-modal customer account back-end that could include Washington State DOT tolling for example.

In most ORCA agencies the scope includes processes primarily within the Fares, Finance, Customer Service, Operations, Maintenance, and Information Technology organizations.

## **4 Out of Scope**

The ORCA Agencies will be responsible for contracting or interfacing with external vendors for any required modifications to agency-specific non-next generation ORCA equipment and systems, and implementation of those changes. Note that as more information becomes available there will be refinements to this strategy.

## **5 Assumptions**

The program plan and organization reflects the following assumptions:

1. The program will be aligned with the ORCA Next Generation Strategy as approved by the Joint Board.
2. The new system is planned to be fully transitioned by the end of current vendor contract (December 31, 2021).
3. There is a potential for multiple vendor contracts and more integration activities than in the first ORCA project.
4. The program will start with the seven current ORCA agencies but will have flexibility to add participants.
5. Business processes will require refinement due to the change to an account-based system but the program will not include reinventing basic business processes.
6. The program will benefit from the agencies' experience and familiarity with current ORCA business processes, requirements, and operation.
7. The next gen ORCA Project Team will work collaboratively with agency subject matter experts to design a regional solution that also meets the needs of each ORCA agency.
8. Policy boards and the public will be more invested in next generation ORCA than the first ORCA project.

## 6 Risks and Concerns

There are seven primary areas of risk associated with the next generation ORCA Program:

### 1. Program size and complexity

- There are seven agencies of significantly different size, multiple transportation modes, a complex regional fare structure, integration with multiple agency-specific systems, and broad organizational impact within each agency.
- This risk is mitigated by the extensive experience the ORCA agencies have in addressing these issues as part of the existing ORCA implementation.

### 2. Evolving technology

- Account-based fare payment systems with open architecture and open loop payment capability are relatively new to the transit industry.
- This risk is mitigated by including a consultant team with experience in this technology and continuing to review lessons learned by regions that are further along with design and implementation of this technology.

### 3. Aggressive schedule

- The program schedule is being driven by the expiration of the operations and maintenance agreement for the existing ORCA system at the end of 2021 and the fact that most of the ORCA equipment will be at or well beyond end of life by that time.
- A full analysis of potential mitigation strategies for this risk will be conducted very early in the program.

### 4. Communications network dependency

- Given the nature of the account-based system, validating equipment must be in constant communications with the back end. For this reason, we will need to install new communications infrastructure on-board, in stations, and perhaps at wayside locations to be able to achieve real-time or near-real-time communications.
- The geography and infrastructure in the region will make this requirement challenging. As a mitigation measure, network coverage will need to be verified early and assessed throughout the program.

### 5. Cooperation of existing ORCA vendor

- The ease of the customer transition from ORCA to next generation ORCA is one of the single most important drivers in this program. There will be a transition period where customers must be able to use ORCA media at the same time as next generation ORCA equipment is installed. Because of this objective, we will likely need our current ORCA vendor to provide support in allowing new next generation ORCA system components to interface with their ORCA backend system, unless a new solution is developed.

- This risk will be mitigated by engagement with the existing vendor early in the program.

#### 6. Negative publicity

- Negative publicity at any time during the planning, development and implementation of the program will have significant impact on the success of the project both in terms of political support and user acceptance.
- Mitigation will be accomplished by a continued customer focus and engaged Agency Public Information Officers.

#### 7. Agency staffing

- Program success will require that the agencies have the ability to commit to the staffing support required to participate throughout the next generation ORCA program timeline, including Site Managers, Subject Matter Experts (SMEs), and other agency-delegated point people. Additionally, in order to achieve alignment within each agency, there are expectations that regular communication is happening within the agencies.
- This risk will be mitigated by providing a three- to six-month look-ahead to the agencies with anticipated resource needs prior to beginning each program phase and major task. Steering Committee members will commit appropriate staff as required.

### 7 Key Dependencies and Success Factors

The following dependencies and success factors have been identified:

1. Executive sponsorship that communicates a common vision for next generation ORCA outcomes and makes the program a high priority within their agencies
2. Engaged agency technology leadership throughout the program
3. Commitment to efficient decision making processes with defined roles regarding decisions
4. Effective communication to all agencies
5. Effective communication *within* each agency to assure fully aligned support of the program
6. Availability of agency subject matter expert and deliverable review resources
7. Effective public information during all phases
8. A tightly managed scope and phased implementation
9. Effective management of potential policy changes and political expectations

### 8 Program Vision and Key Success Indicators

The next gen ORCA Steering Committee has adopted the follow Vision Statement for the program:

*next generation ORCA: a flexible and secure system offering customers convenient transportation payment options.*

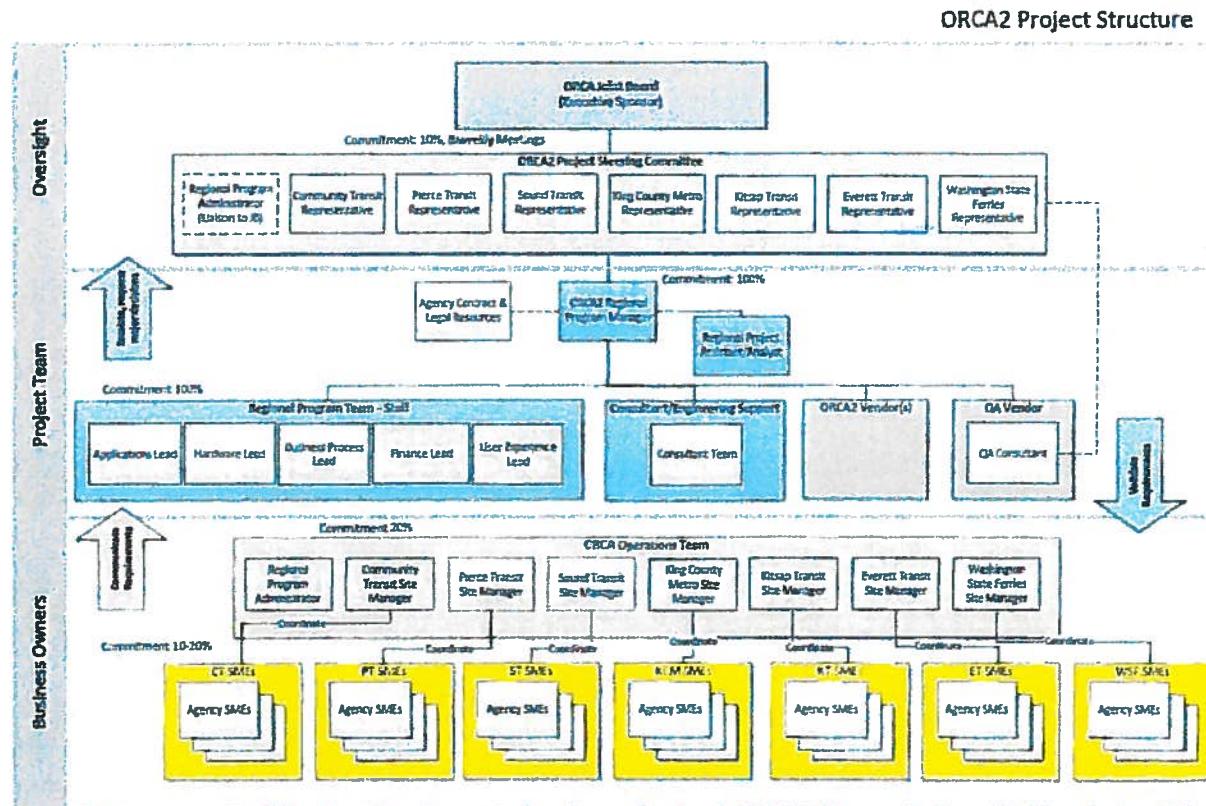
Success indicators include:

- Delivery of a stable, secure and cost-efficient system

- A system that will scale and evolve as technology, agency and customer needs change
- Delivery of major scope items in the fully-launched customer environment by the end of 2021
- Achievement of customer satisfaction throughout the transition
- Eventual increased adoption of electronic fare payment
- Completion within the approved budget
- Satisfaction of the operating agencies
- Low equipment Mean Time Between Failures (MTBF)
- High backend availability and system up-time (99.99% or better)

## 9 Program Governance and Team Structure

The project structure has been designed to efficiently support the ORCA agencies in meeting the business requirements within the schedule constraint. The following diagram illustrates the three levels within the project structure adopted by the Joint Board. An Interlocal Agreement (ILA) between the seven ORCA agencies will be amended to include the agencies' obligations to the program and the program roles and responsibilities. The ILA has precedence over this next generation ORCA Program Charter.



The three layers of the project structure are outlined below with further detail included in the roles and responsibilities table in Section 10.

#### ***A. Oversight***

Program oversight is provided by the Joint Board and the next gen ORCA Steering Committee. Both entities are made up of a representative from each of the seven ORCA agencies and are supported by the ORCA Regional Program Administrator.

The Joint Board has overall responsibility for the existing regional fare system in addition to the next generation ORCA Program. It is the role of the next gen ORCA Steering Committee and next gen ORCA Regional Program Manager to inform and advise the Joint Board on program status, budget, risks, and issues. The Steering Committee and Program Manager are expected to offer recommendations and to provide information relevant to Joint Board's interest in the regional fare replacement system program.

The Steering Committee consists of individual agency members selected and appointed by their agency Joint Board member. Committee members constitute a cross-section of leaders with expertise in fare collections, policy, technology, operations and customer service. The Steering Committee has program scope and schedule authority within the budget authorized by the Joint Board. The Joint Board retains overall program budget authority.

#### ***B. Project Team***

The next gen ORCA Project Team is made up of staff dedicated to the planning and implementation of next generation ORCA program in collaboration with ORCA agency staff. Members of the full time Project Team include:

1. Regional Program Manager
2. Project Assistant
3. A collaborative next gen ORCA Regional Program Team made up of the following five Leads who will provide end-to-end oversight of these areas for the duration of the program. These Leads will engage subject matter experts from the various ORCA agencies to collect needs and conduct analysis to identify optimal solutions for the region.
  - a. Business Process Lead – This lead will focus on regional and agency functional needs of the new system including those related to distribution, sales, customer service, operations, maintenance, and business accounts in addition to all related reports.
  - b. Applications Lead (Fare Systems Enterprise Solution Architect) – This lead will focus on the application and integration needs of the new system based on an open architecture, ensuring adherence to requirements, industry and regulatory compliance, as well as architectural characteristics such as scalability and recoverability.
  - c. Hardware Lead (Fare Systems Hardware Architect) – This lead will focus on next generation ORCA hardware specification, selection, integration and installation as well as determining the requirements and strategies for network communications and integration with non-ORCA hardware.
  - d. Finance Lead – This lead will focus on financial transaction, reconciliation, settlement and apportionment including reporting related needs, business rules and operating procedures.
  - e. User Experience Lead – This lead will focus on all interfaces between the system and agency staff and customers.

This staff team will be assisted as needed by agency-provided procurement and legal staff. In addition, support to the program will be provided by the ORCA Regional Program Administrator, the ORCA Fiscal Agent and the ORCA Security Officer.

The Project Team layer also includes the Consultant Team (Four Nines), Vendor(s), and a Quality Assurance (QA) consultant.

### **C. Business Owners**

The seven ORCA agencies are the business owners. The next gen ORCA Project Team will collaborate with the Site Managers or other Agency-designated point persons, and Subject Matter Experts (SMEs) within each agency throughout the program. The requirements gathering phases will include a range of SMEs from each agency. However, the Site Manager or other Agency-designated point person will coordinate agency review of program deliverables and present a consolidated agency view.

## **10 Roles and Responsibilities**

Role	Responsibilities
ORCA Joint Board (JB)	<ul style="list-style-type: none"> <li>• As executive sponsors, champion the next generation ORCA Program within their agencies and to their governing boards</li> <li>• Approve budget modifications above the authority given to the Steering Committee</li> <li>• Adopt strategic direction of next generation ORCA Program</li> <li>• Address program issues escalated by the next gen ORCA Steering Committee</li> </ul>
next gen ORCA Steering Committee (OSC)	<ul style="list-style-type: none"> <li>• Advocate next generation ORCA as a high priority within their agency and champion the common vision for next generation ORCA outcomes</li> <li>• Provide general oversight for the Project Team</li> <li>• Provide strategic leadership for the program making appropriate scope and schedule decisions within the budget authority delegated by the ORCA Joint Board</li> <li>• Inform the ORCA Joint Board of significant decision making regarding high level scope, costs, schedule, and technology choices</li> <li>• Advise and provide direction to the Regional Program Manager on program processes and organizational structure</li> <li>• Resolve program issues and interagency conflicts</li> <li>• Prioritize tasks and resolve resource allocation issues based on program prioritization</li> <li>• Address escalated contractor performance issues</li> <li>• Communicate Steering Committee decisions and actions within their organizations</li> <li>• Resolve resource constraints within their agency</li> </ul>

Role	Responsibilities
next gen ORCA Regional Program Manager (RPM)	<ul style="list-style-type: none"> <li>• Successfully deliver a system that balances regional and individual agency needs</li> <li>• Manage program scope, schedule, budget, risks and program communication</li> <li>• Provide oversight of all next generation ORCA contracts and procurements</li> <li>• Manage Consultant Team and Vendor performance</li> <li>• Lead the Regional Program Team through the full lifecycle of delivering next generation ORCA</li> <li>• Maintain effective communications and coordination with program stakeholders and next gen ORCA Steering Committee</li> <li>• Maintain oversight of agency implementation activities and dependent projects. Work with Agencies to ensure activities are proceeding as planned.</li> <li>• Coordinate with the ORCA Regional Program Administrator on Steering Committee agendas and Joint Board briefings and action items</li> <li>• Act as program liaison to outside entities</li> <li>• Serve as an escalation contact to Project Team, Consultants, Vendors, Site Managers, Contracting and Legal Support and SMEs (where applicable)</li> <li>• Coordinate with agencies on upcoming meetings and anticipated resources required</li> </ul>
next gen ORCA Regional Program Team (RPT)	<ul style="list-style-type: none"> <li>• Collaborate with other Regional Program Team Leads, Consultant Team and Vendors to achieve the objectives of the program</li> <li>• Represent the diverse needs of the entire region and be resources for the Consultant Team and vendors</li> <li>• Serve as technical and business leads for strategic direction of next generation ORCA program</li> <li>• Work as a team to drive nimble day-to-day project decisions and help to keep the next generation ORCA program on task and on schedule</li> <li>• Provide a lead role in consolidating agency input for functional and technical requirements, design review, testing and deployment, planning, and coordination in support of consultant and vendor deliverables</li> <li>• Support development, review and approval of consultant deliverables</li> <li>• Work collaboratively with Agency representatives to develop an understanding of the business and technical environments of the diverse set of ORCA agencies</li> <li>• Manage the capture, analysis, and documentation of information provided by ORCA agency SMEs</li> <li>• Work with ORCA agency SMEs</li> <li>• Assist agencies with implementation planning and business process changes</li> <li>• Participate in next gen ORCA Steering Committee and other next generation ORCA meetings as discipline leads (as needed)</li> </ul>

Role	Responsibilities
Site Managers (SM) or Designated Agency Leads	<ul style="list-style-type: none"> <li>• Point of coordination for their agency's business requirements and technical constraints</li> <li>• Coordinate agency review of program deliverables and present a consolidated agency view</li> <li>• Coordinate participation and support from appropriate and available Agency SMEs and other agency resources; identify and communicate resource constraints to the agency's Steering Committee member</li> <li>• Funnel any issues to the next gen ORCA Regional Program Manager</li> <li>• Validate that the design meets the stated Agency business requirements at key points in the program</li> <li>• Coordinate agency level testing, training, implementation, operations, and maintenance of next generation ORCA system</li> <li>• Support the transition from ORCA to next generation ORCA</li> </ul>
Agency Subject Matter Experts (SMEs)	<ul style="list-style-type: none"> <li>• Provide specific discipline expertise and work collaboratively with the Project Team to define requirements and envision solutions</li> <li>• Coordinate with Agency Site Manager or Designated Lead regarding participation in next generation ORCA</li> <li>• Attend meetings as needed, review documents, and meet deadlines required for design, review and implementation</li> <li>• Support the Project Team for business requirement and technical constraint clarification, solution alternatives analysis and issue resolution, use case and test case development</li> <li>• Test design and implementation as needed</li> </ul>
ORCA Regional Program Administrator (RPA)	<ul style="list-style-type: none"> <li>• Act as liaison to the Joint Board, Steering Committee, and to the Site Manager group</li> <li>• Provide regional ORCA customer outreach, marketing, legal, and public information resources</li> <li>• Coordinate Fiscal Agent and Security Officer support of the program</li> <li>• Coordinate with existing ORCA system vendor</li> <li>• Support the transition from ORCA to next generation ORCA</li> <li>• Maintain program rosters of Site Managers, Project Team members, Steering Committee members and Joint Board members</li> </ul>
Contracting and Legal Support (provided by ST)	<ul style="list-style-type: none"> <li>• Manage regional procurement and contracting processes as requested by the next gen ORCA Regional Program Manager</li> <li>• Provide legal services, including drafting Terms and Conditions, Service Level Agreements (between the agencies and with the vendors), exhibits to the ILA, and advising the next gen ORCA Regional Program Manager and next gen ORCA Steering Committee</li> </ul>

Role	Responsibilities
QA Consultant	<ul style="list-style-type: none"> <li>Provide outside review to assure the adherence to scope, schedule, and budget is being properly monitored throughout the program</li> <li>Advise the next gen ORCA Regional Program Manager and next gen ORCA Steering Committee of issues and risks</li> <li>Ensure that program requirements are being met</li> </ul>
Consultant Team (Four Nines Technologies)	<ul style="list-style-type: none"> <li>Advise on fare collection industry and regulatory issues</li> <li>Provide a lead role in delivering: <ul style="list-style-type: none"> <li>Systems Engineering documents to meet requirements set forth by the FTA</li> <li>Project Planning documents, including maintaining schedule and Work Breakdown Structure (WBS)</li> <li>Concept of Operations</li> <li>High-Level System Design</li> <li>Business, Technical and Integration Requirements</li> <li>RFI process and Peer Review</li> <li>Alternatives Analysis</li> <li>Solution Design and Transition Strategy</li> <li>Systems integration documents and specifications for function-based APIs</li> <li>Scope of Work for vendor RFPs</li> <li>Requirements Traceability Matrices</li> </ul> </li> <li>Support Request for Proposal (RFP) evaluation processes</li> <li>Support testing, verification, and implementation</li> <li>Review vendor deliverables and advise on systems integration</li> <li>Support Operations and Maintenance phase as needed</li> </ul>
Vendor(s)	<ul style="list-style-type: none"> <li>Provide software, hardware, and services solutions</li> <li>Provide systems integration support as specified</li> </ul>

## 11 Communication Plan

This section describes the formal next generation ORCA Program-related communication mechanisms and decision making and issue escalation processes.

### ***A. Standard Program Communication Mechanisms and Tools***

The following is a list of the standard communication mechanisms and tools that will be employed during the course of the program. These are in addition to on-going informal communication and ad hoc meetings. Note that the next generation ORCA SharePoint site is hosted by Sound Transit and accessible to Joint Board members, next gen ORCA Steering Committee members, the next gen ORCA Regional

Program Manager, next gen ORCA Regional Program Team, program-related committee members and Site Managers.

1. Twice monthly Status Reports prepared by the Regional Program Manager and posted to the existing next generation ORCA SharePoint site
2. Program-related committee meeting notes posted to the next generation ORCA SharePoint site
3. Other project documents posted to the next generation ORCA SharePoint site
4. Regional Program Manager briefings to monthly Joint Board meetings
5. Regional Program Manager briefings to twice monthly Steering Committee meetings
6. Regional Program Manager briefings to Site Managers as necessary
7. Three to six month 'look ahead' to the Steering Committee identifying upcoming agency resource needs
8. Weekly internal Regional Program Team meetings
9. A Project Team file sharing tool to be determined
10. Weekly meetings between the Regional Program Manager and the Consultant Team Project Manager and Regional Program Team, as needed

#### ***B. Decision Making and Issue Escalation***

The following table outlines the formal avenues for decision making and official paths for issue escalation.<sup>2</sup>

#	Decision	Developed By	Reviewed By	Recommended By	Reviewed and Approved By
1	Acceptance/approval of strategic documents and deliverables – Project Planning, Systems Engineering, and Strategic Documents	Consultant and next gen ORCA Regional Program Team	Regional Program Team and next gen ORCA Regional Program Manager	N/A	next gen ORCA Regional Program Manager (with input incorporated from next gen ORCA Steering Committee briefing)
2	Acceptance/approval of detailed documents and deliverables – Concept of Operations, Requirements and Design documents	Consultant, next gen ORCA Regional Program Team and Agency SMEs	Agency Point Person	Regional Program Team (including omitted comments)	next gen ORCA Regional Program Manager (with input incorporated from next gen ORCA Steering Committee briefing)

<sup>2</sup> Decision making and issue escalation shall be consistent with the next gen ORCA Steering Committee Charter approved by the Joint Board 6/8/15 which states: "The ORCA Joint Board retains overall budget responsibility for the regional fare system. It is the role of the (next gen) ORCA2 Steering Committee and Project Manager to inform and advise the ORCA Joint Board on project status, budget, risks, and issues."

#	Decision	Developed By	Reviewed By	Recommended By	Reviewed and Approved By
3	Acceptance/approval of operational documents and deliverables – Implementation Plan, Training Plan, Testing Plan, Transition Plan	Consultant, next gen ORCA Regional Program Team and Agency SMEs	Agency Point Person	next gen ORCA Regional Program Team (including omitted ommits)	next gen ORCA Regional Program Manager (with input from next gen ORCA Steering Committee briefing)
4	Scope changes	Consultant and next gen ORCA Regional Program Team	next gen ORCA Regional Program Team	next gen ORCA Regional Program Manager	next gen ORCA Steering Committee
5	Schedule changes	Consultant and next gen ORCA Regional Program Team	next gen ORCA Regional Program Team	next gen ORCA Regional Program Manager	next gen ORCA Steering Committee
6	Budget changes (beyond the authority of the Steering Committee)	Consultant and next gen ORCA Regional Program Team	next gen ORCA Regional Program Manager, Fiscal Agent	next gen ORCA Steering Committee	Joint Board
7	Vendor selection and Contract awards	Consultant and next gen ORCA Regional Program Team	Agency Point Person	next gen ORCA Regional Program Manager and next gen ORCA Steering Committee	Joint Board

\* For deliverable review, the role of the Site Managers or other delegated agency point people is to circulate deliverables for review by appropriate internal staff for the purpose of confirming that their agency's requirements have been met. If agency requirements have not been met, Site Managers or point people will provide the specific reasons. The next gen ORCA Project Team will work with the Agencies to resolve unmet needs. Any remaining open issues will be elevated to the next gen ORCA Steering Committee.

The official issue escalation path is from the next gen ORCA Regional Program Manager to the next gen ORCA Steering Committee to the Joint Board. Potential issues include contractor or vendor performance, interagency conflicts, and next gen ORCA Regional Program Team or next gen ORCA Regional Program Manager performance. Program-related agency-specific issues can be escalated by the Site Manager to the next gen ORCA Regional Program Manager, or by agency SMEs as necessary. Consultants and system vendors may also escalate issues to the next gen ORCA Regional Program Manager. The Quality Assurance Consultant will escalate any issues to the next gen ORCA Regional Program Manager, but may escalate issues directly to the next gen ORCA Steering Committee regarding next gen ORCA Regional Program Manager performance or other applicable issues.

## 12 Related Dependent Projects

The program has dependencies with several important and concurrent ORCA agency initiatives outside the scope of the next generation ORCA Program. These initiatives include:

- Service expansion: Sound Transit's Link, King County Metro's Rapid Ride, Community Transit's SWIFT
- Expiration of Sound Transit Ticket Vending Machine contract with Scheidt & Bachmann in 2019
- Communication infrastructure upgrades at King County Metro, Community Transit, or any other agencies updating equipment or networks
- Other onboard technology upgrade projects such as Computer Aided Dispatch / Automatic Vehicle Location (CAD/AVL), Automatic Passenger Counters (APC)
- Farebox replacement at multiple agencies
- Replacement of the Washington State Ferries' Wave2Go system
- An upgrade of WSDOT's tolling account system
- The Mobile Ticketing Pilot underway at King County Metro and Sound Transit
- Updates to the ORCA LIFT program
- ORCA system security and PCI upgrades
- ORCA front-end website redevelopment
- Smart Cities initiatives for creating a transportation marketplace including transit accounts
- Transit-related parking initiatives

## 13 Major Phases and Deliverables

Phase	Deliverables	Target Completion Date
Planning	Program Plan, Systems Engineering Management Plan, Request for Information, Concept of Operations, Validation Plan, High Level Design, System Technical Requirements, Business Requirements	Q4 2016
Procurement	Alternatives Analysis, Integration Plan, Technical Specifications, Procurement Strategy, RFP Scope(s) of Work, Vendor Proposal Review	Q1 2018
Design	Detailed Design Documents, Systems Acceptance Plan, Interface Requirements, Systems Integration Plan, Verification Plan, Transition Plan	Q4 2018
Development and Testing	Test Plans and Procedures, Test Results	Q3 2019

Phase	Deliverables	Target Completion Date
Deployment and Validation	Installation Guides	Q2 2021
Transition	Standard Operating Procedures, Training Materials, User Manuals, Maintenance Manuals	Q4 2021
Operations and Maintenance	Key Performance Indicators	Begin Q4 2021
Close Out	Close Out Report	Q2 2022

## 14 Program Budget

Refining the program budget is a key initial task for the next gen ORCA Project Team. A revised budget developed and evaluated with the Consultant as part of the Program Plan, will be proposed for adoption by the next gen ORCA Steering Committee and the Joint Board in Q2 2016.